



Complete Summary

TITLE

Eye care: percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and no significant ocular conditions impacting the visual outcome of surgery and had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days following the cataract surgery.

SOURCE(S)

American Academy of Ophthalmology, Physician Consortium for Performance Improvement®, National Committee for Quality Assurance. Eye care physician performance measurement set. Chicago (IL): American Medical Association, National Committee for Quality Assurance; 2007 Oct. 36 p. [42 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Outcome

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and no significant ocular conditions impacting the visual outcome of surgery and had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days following the cataract surgery.

RATIONALE

1. Scientific basis for measuring visual acuity outcomes after cataract surgery

The only reason to perform cataract surgery (other than for a limited set of medical indications) is to improve a patient's vision and associated functioning. The use of a 20/40 visual acuity threshold is based on several considerations. First, it is the level for unrestricted operation of a motor vehicle in the US. Second, it has been consistently used by the US Food and Drug Administration (FDA) in its assessment for approval of intraocular lens (IOL) and other vision devices. Third, it is the literature standard to denote success in cataract surgery. Fourth, work by West et al. in the Salisbury Eye Study, suggests that 20/40 is an useful threshold for 50th percentile functioning for several vision-related tasks.

Most patients achieve excellent visual acuity after cataract surgery (20/40 or better). This outcome is achieved consistently through careful attention through the accurate measurement of axial length and corneal power and the appropriate selection of an IOL power calculation formula. As such, it reflects the care and diligence with which the surgery is assessed, planned and executed. Failure to achieve this after surgery in eyes without comorbid ocular conditions that would impact the success of the surgery would reflect care that should be assessed for opportunities for improvement.

The exclusion of patients with other ocular and systemic conditions known to increase the risk of an adverse outcome reflects the findings of the two published prediction rule papers for cataract surgery outcomes. In both papers, the presence of comorbid glaucoma and macular degeneration negatively impacted the likelihood of successful outcomes of surgery. Further, exclusion of eyes with ocular conditions that could impact the success of the surgery would NOT eliminate the large majority of eyes undergoing surgery while also minimizing the potential adverse selection that might otherwise occur relative to those patients with the most complex situations who might benefit the most from having surgery to maximize their remaining vision.

Use of this indicator in the Physician Quality Reporting Initiative (PQRI) program would require some modification to the current reporting of post-operative care for patients undergoing cataract surgery, since this indicator would be operative during the 90 day global period. However, there is a strong and practical precedent for such modifications in that reporting arrangements have previously been made to accommodate co-management of care by different providers during the post-operative period. A similar adjustment to allow for filing of a claim of meeting this goal at one point in the 90 day global period would be sufficient, potentially drawing upon the methods to demarcate the onset of co-management transfer of post-operative care.

2. Evidence of a gap in care

This is an outcome of surgery indicator of direct relevance to patients and referring providers. The available evidence suggests that cataract surgery achieves this in between 86 and 98% of surgeries in eyes without comorbid ocular conditions (this indicator). While small, the volume of cataract surgery in the US of over 2.8 million surgeries suggests that the impact could affect more than 100,000 patients per year. Because of the exclusion of comorbid ocular conditions, one would expect performance on this indicator to be as

high as possible, with significantly lower rates suggestive of opportunities for improvement.

The American Society of Cataract and Refractive Surgery (ASCRS) National Cataract Database reported that at 3 months postoperatively, 85.5% of all patients had a 20/40 or better best-corrected visual acuity, 57.2% of patients had 20/25 or better postoperative best-corrected visual acuity, and 74.6% of patients were within ± 1.0 D of target spherical equivalent. Based on 5,788 responses, the mean visual function index score at 3 months postoperatively was 70.3% compared with 55.0% preoperatively. (The score is based on a scale of 0 to 100, with 0 indicating an inability to perform any of the activities.) The European Cataract Outcome Study reported for 1999 that 89% of patients achieved a postoperative visual acuity of 0.5 or more (20/40 or better), the average induced astigmatism was 0.59 D, and 86% of patients had an induced astigmatism within ± 1.0 D.

The American Academy of Ophthalmology (AAO) National Eyecare Outcomes Network (NEON) database also found similar rates of success, with an improvement in visual acuity in 92.2% of patients and improvement in VF-14 in over 90% of patients. Best-corrected visual acuity of 20/40 was achieved by 89% of all NEON patients and 96% of NEON patients without preoperative ocular comorbid conditions. Seventy-eight percent of patients were within ± 1.0 D of target spherical equivalent. Ninety-five percent of patients reported being satisfied with the results of their surgery. Patients who were dissatisfied with the results of their surgery were slightly older and more likely to have ocular comorbidity.

In studies of phacoemulsification cataract surgery performed by ophthalmology residents, the reported range of patients with postoperative best-corrected visual acuity (BCVA) of 20/40 or better is 80% to 91%. If eyes with ocular comorbidities are excluded, the reported range of patients with postoperative BCVA of 20/40 or better is 86% to 98%.

The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:

This is an outcomes measure.

As such, no statements in the guideline are specific to this measurement topic.

PRIMARY CLINICAL COMPONENT

Cataract surgery; best-corrected visual acuity of 20/40

DENOMINATOR DESCRIPTION

All patients aged 18 years and older who had cataract surgery and no significant pre-operative ocular conditions impacting the visual outcome of surgery (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Patients who had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days following cataract surgery

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [Cataract in the adult eye.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Variation in quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

American Academy of Ophthalmology, Physician Consortium for Performance Improvement®, National Committee for Quality Assurance. Eye care physician performance measurement set. Chicago (IL): American Medical Association, National Committee for Quality Assurance; 2007 Oct. 36 p. [42 references]

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Physician Group Practices/Clinics

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All patients aged 18 years and older who had cataract surgery and no significant pre-operative ocular conditions impacting the visual outcome of surgery

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

All patients aged 18 years and older who had cataract surgery and no significant pre-operative ocular conditions impacting the visual outcome of surgery

Exclusions

Patients with co-morbid conditions that impact the visual outcome of surgery (see the Denominator Exclusions spreadsheet in the original measure documentation)

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Encounter
Therapeutic Intervention

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients who had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days following cataract surgery

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Not Individual Case

OUTCOME TYPE

Clinical Outcome

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Measure #4 cataracts: 20/40 or better visual acuity within 90 days following cataract surgery.

MEASURE COLLECTION

[The Physician Consortium for Performance Improvement® Measurement Sets](#)

MEASURE SET NAME

[Eye Care Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the American Academy of Ophthalmology, the National Committee for Quality Assurance, and the Physician Consortium for Performance Improvement®

DEVELOPER

American Academy of Ophthalmology
National Committee for Quality Assurance
Physician Consortium for Performance Improvement®

FUNDING SOURCE(S)

Unspecified

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FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Conflicts, if any, are disclosed in accordance with the Physician Consortium for Performance Improvement® conflict of interest policy.

INCLUDED IN

Ambulatory Care Quality Alliance

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2007 Oct

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

American Academy of Ophthalmology, Physician Consortium for Performance Improvement®, National Committee for Quality Assurance. Eye care physician performance measurement set. Chicago (IL): American Medical Association, National Committee for Quality Assurance; 2007 Oct. 36 p. [42 references]

MEASURE AVAILABILITY

The individual measure, "Measure #4 Cataracts: 20/40 or Better Visual Acuity within 90 Days Following Cataract Surgery," is published in the "Eye Care Physician Performance Measurement Set." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on February 13, 2008. The information was verified by the measure developer on April 22, 2008.

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